program 18 to print. The program 18 sections the digital representation 17 into a plurality of discrete two-dimensional layers, each of a predetermined thickness.

The program 18 prints each layer by sending high-level instructions to control electronics 52 in the printer 3, which operates the three-dimensional printer 3. Alternatively, the digital representation of the object 17 can be directly read from a computer-readable medium (e.g., magnetic or optical disk) by printer hardware. The three-dimensional printer 3 includes a dirty area 20 where the printing is performed and a clean area 50 where control electronics 52 are housed.

The three-dimensional printer 3 uses inkjet type printheads to deposit binder onto successive layers of a powdered build material, such as disclosed in U.S. Patent No. 5,902,441 to Bredt, et al., the teachings of which are incorporated herein by reference in their entirety. Where the binder combines with the build powder, the powder reacts and cures into a solid structure. By controlling the placement of binder droplets from these printheads, the solid structure of the 2-D cross section can be physically reproduced. The three-dimensional printer 3 fabricates a physical layer for each sectioned layer provided by the program 18. When the file has been completely printed, a three-dimensional part 5 has been formed. Further details of binding a powder to form an object are disclosed in U.S. Patent Nos. 5,340,656 to Sachs et al., 5,387,380 to Cima et al., and U.S. Application No. 09/835292 entitled Compositions for Three-Dimensional Printing of Solid Objects, filed on April 13, 2001, by Bredt et al. (Attorney Docket No. 2247.2001-001), the teachings of which are incorporated herein by reference in their entirety.

The post-processing system 7 may be used to improve the prototype object 9 from the printed part 5. Various finishing options are available depending on the result to be achieved.

Those of ordinary skill in the art should recognize that methods involved in prototyping a three-dimensional object may be embodied in a computer program product that includes a computer usable medium. For example, such a computer usable medium can include a readable memory device, such as a solid state memory device, a